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• Contributions To Film Photography

FEBRUARY

1960



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ON THE COVER

LEIGH "CURLY" LINDON, A.S.C., takes up a shot on the "moon" set for "Destination Moon." George Pal production filmed at General Service Studios. One of the most exciting and realistic sets ever built in Hollywood, it afforded director of photography Lindon opportunity to experiment his dramatic individuality. The story of this interesting filming assignment begins on page 46 of this issue.—Photo by Shadowfax Entry.



AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes non-resident cinematographers and cinematographers in foreign lands. Membership is by invitation only.

The Society meets regularly once a month at its clubhouse at 2878 North Orange Drive, in the heart of Hollywood. On November 2, 1949, the Society established its monthly publication "American Cinematographer" which it continues to sponsor and which is now circulated in its entirety throughout the world.

Domestic aims of the Society are to bring into close confederation and cooperation all leaders in the cinematographic art and science and to strive for pre-eminence in artistic perfection and scientific knowledge of the art.

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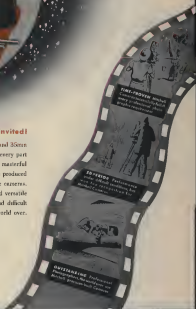
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HOLLYWOOD BULLETIN BOARD

JACK CAROFF, A.S.C., after a hectic two years shooting in Europe, is resting at Montana Hall, Montana, Switzerland. Caroff's busy two years embraced the filming of "Scott of the Antarctic," "Under Captions," and his most recent assignment, "Black Rose," starring Tyrone Power.

WILLIAM SHYDER, A.S.C., has left his home for Columbia Pictures, temporarily to direct the photography of "The Tamer Of New Orleans," at M-G-M. Synder is a nominee for a photography "Oscar" this year for his filming of "Jolson Sings Again."

SOL POLITO, A.S.C., victim of a freak auto accident early last month, is expected to leave St. Vincent's Hospital, Los Angeles, about February 20th.

HARRY JACKSON, A.S.C., whose long line of cinematographic credits at 20th Century-Fox has culminated in a nomination for an Academy Award for the photography of "Oh, You Beautiful Doll," has moved over to M-G-M to film the Technicolor production, "Three Little Words," starring Fred Astaire, Vera Ellen and Red Skelton.

A.S.C. MEMBERS were given a preview of the new, recently-invented Eastman Kodak mag-gun color film, when a demonstrator reel was screened at the last meeting of the Society in Hollywood. Emory Huse, A.S.C., who made a brief talk preceding the screening, advised that the film was merely a sort of progress report, and that the product would not be commercially available for probably a year. The reel comprised scenes photographed by cameramen at 20th Century-Fox, Cinecolor, and Columbia Pictures, and while there was detectable differences in the colors of such group shots, the new color system as a whole carries much promise: both for color rendition and the fact that the studios will be able to process it and make their own release prints.

METRO-GOLDWYN-MAYER last month announced it had completed a series of extensive tests on the use of Anaco Color for its productions, and would proceed with its use as a number of that studio's short subjects scheduled for 1950. According to John Arnold, A.S.C., M-G-M camera department head, initial subject will be a musical short directed by Jack Donaghy.

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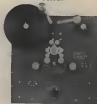
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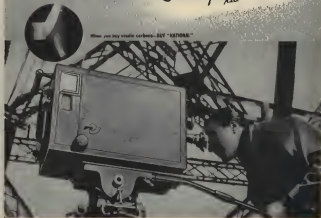
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TRICK SHOT—Curly London, sitting behind Technicolor camera mounted in special tripods, films scene of scientist who jumps through space on oxygen tank, riding on surface of comets beam. White dots are "stars"—they are handlight lamps.

Filming A Trip To The Moon

Novel photographic and lighting innovations employed in filming "Destination Moon," saga of scientists who rocket to the satellite and back—in Technicolor.

By LEIGH ALLEN



ROCK UP in sound stage rafters, London makes shot of scientist on moon's surface, as seen from port-hole of space ship.



SPACE SHIP interior was built so it could be refitted as turned on side for high shots of men walking on sides, sailing, etc.

MOST ANY DAY NOW we can expect the world-shaking report that man has successfully traveled to the moon. And although the feat will have been accomplished through the magic of motion pictures, most of us who have kept abreast of world scientific developments are aware that preparations for just such an exploit have quietly been going on for some time, and that travel to the moon by rocket ship is freely considered likely to take place during this generation.

Seizing upon this timely and most intriguing idea, George Pal has directed his ventures in animation responsibly to produce "Destination Moon," a color motion picture which concerns the adventures of four scientists who travel by space ship to the moon, explore its surface, and return safely to earth again.

Pal's picture is no hasty contrived saga from the pen of an imaginative writer running rampant. The entire story, from main title to final fadeout, is based on scientific facts and their probable consequences. And because of this, the production became one of the most intriguing assignments ever handed a Director of Photography. This important responsibility fell to Lionel "Curly" London, A.S.C., who is credited with a top-drawer job of Technicolor photography. What London's camera tricks did to enhance the realism of Ernest Fegge's art direction and to the highly imaginative locale contrived by author-scientist Robert Heinlein, who wrote the script, remains for the reader to observe for himself when "Destination Moon" is released next August.

Except for the sequence depicting the takeoff of the ship from a point in a Southwestern desert, London filmed all of the picture indoors on the sound stages of General Service Studios in Hollywood. There, occupying the entire floor of Stage

(Continued on Page 47)



NO, this isn't wrong! It's one of the trick shots showing moon traveler with magnified shoes walking down wall of rocket—photographed with camera turned on side.



TYPICAL movie set for a TV film in which large uniformly spaced areas have been broken up by a pattern design, in order to reduce the "betwixt mean" effect frequently seen in the receiver image.



STUDIED set showing large pattern design and shape proportion—a type of set which compresses well with present television systems and which is preferred for photography of films for television.

Producing Films For Television

Continuation of the Eastman Kodak Company report on lighting, film densities and types of film recommended for the photography of motion pictures for television.

LAST MONTH we stated that a motion picture print that is to be televised should have a lower density range than one which is intended for normal projection use. The exact density will vary somewhat, of course, depending on the nature of the particular subject or scene.

The question which immediately arises is what method to use in order to obtain the desired density compression in the positive print. Upon first examination it might appear that this might be accomplished equally well in at least three different ways:

(1) In exposing the original negative, use a subject lighting contrast which is considerably lower than that which is normally used for conventional black and white motion picture photography, and process both the negative and print in the normal way.

(2) Use normal lighting contrast and exposure but alter the processing conditions of negative or positive or both, to obtain an overall reproduction gamma which is lower than normal.

(3) Use normal lighting contrast and

exposure, process the negative and positive in the usual manner, but make the print 2 or 3 or more printer steps lighter than what would be desirable if the print were to be used for normal projection purposes.

Experience has indicated that Method (1) is by far the best way to obtain the desired density compression for several reasons. First of all, this method involves no departures from standard practice in the processing laboratory operations. Secondly, the amount of density range compression provided by Methods (1) and (2) or both is not sufficient in many cases to bring the density range of the final print within the limits demanded by the television system. It is important to recognize too, that lowering of the negative and positive gamma value and manipulation of the print exposure does not result in the same tone reproduction characteristics as would be obtained with alteration of the lighting contrast given in Method 1. Finally, if Method (1) is used, some additional compression of the density range of the final positive may still be effected, by making lighter than normal prints, if this need arises, such as, for example, where the subject or scene was of a very contrasty nature.

Where it is not possible to control the lighting contrast in making the original negative, then Methods (2) and (3) might be used as a last resort. This would apply particularly in the case of motion picture production negatives that have already been released but are now being used for television broadcast purposes. On the basis of present evidence, however, such a procedure would mean a definite compromise in quality.

From the above discussion, it is evident that there is a definite limit to the maximum density in the positive print, above which, details in the shadow regions of the picture will not be seen on the receiver screen, because of the brightness range limitations of the television system. There is another reason for limiting the maximum density in the positive print. At the present time, the kinoscope camera tube is almost universally used for film telecasting. In the electronic scanning process employed with this tube, the secondary emission of electrons from the mosaic screen and the instability of the positive collector to collect all of these negative charges, results in an edge-flare effect when the density rises above a certain value or when rapid changes in den-

(Continued on Page 60)

The foregoing is condensed from "The Use of Motion Picture Films in Television," by Eastman Kodak Company. Part 1 appeared in the January issue—EBCN.



NO SOFT SHOTGUN here for tripod legs, as Vincent Farrar's camera crew held tripod on steady man's shoulder to keep it from slipping while the camera ate on a horse for Columbia Pictures' "The Palomino" studio's initial outdoor drama in Technicolor Monopack.

Tough Assignment

Locale, terrain and tricky colors combined to make photography of "The Palomino," Columbia's first outdoor drama in Monopack, a challenging undertaking.

By VINCENT FARRAR, A S C

WHEN PRODUCER Robert Cohn elected to shoot Columbia Pictures' Technicolor production, "The Palomino," in a remote and nearly-inaccessible locale in the mountains north of Hollywood, he also set for me and my camera crew one of the most challenging of photographic assignments. Probably few Technicolor pictures produced to date involved the risks to personnel and equipment that we encountered.

Although it is customary for Hollywood to get tried and true location areas for its westerns and outdoor dramas, Cohn decided to find a virgin spot for this unusual story, which involves a valuable Palomino horse that has been stolen and hidden away in a mountain fastness overlooking a beautiful valley.

Because of the wonderful color of the golden Palomino horses used in the picture, Cohn, from the beginning, wanted a perfect natural setting as a framework for the horses' activities. So, long before

the picture went into production, an extensive search was launched for such a location. The script called for rugged, mountainous terrain overlooking a valley with bright green patches. But the time of year wasn't favorable for the fresh, green grass needed for the color cameras and for awhile the search seemed hopeless.

Location scouts scoured the Southern California countryside for several hundred miles around, but none of the spots suggested seemed to meet script specifications. And then, Jerome Courtland—star of the picture—remembered something. He recalled a certain area in the Santa Susana mountain range, 25 miles from Hollywood, where he had hunted and fished during a recent vacation. And he painted such a vivid picture of its natural beauty that Producer Cohn hunted him. Director Ray Nazario and myself into his car and made a beeline

(Continued on Page 42)



SHOOTER really broke wide landscape the use of large Technicolor camera, as "The Palomino" was shot in Monopack with a regular camera.



TWO PLAYERS frame view of green valley in distant background—composition almost which led to selection of this site for the picture.



SHOOTER shows and plane view shackle safeguarded while Palomino performing on rocky ledge in construction, suspended from crane, made the shot.



TO FILM running security of attempting horses, etc., studio built a 1500-foot strip of road on the mountain top.



YESTERDAY—Whenever Disney's Studio filmed on location, this old-time motor-generator set produced enough power to light a few street scenes, or part of it, as this picture proves. Then, as now, special provisions had to be made for generating D-C, necessary for arc lights.



TODAY—This compact Westinghouse motor-generator set packs a punch—420 kilowatts worth. Disney Studio engineers designed it with an eye to safety and efficiency. So perfectly insulated is the housing that generator may be operated close to scenes of shooting with safety.

When a Walt Disney production unit goes shooting on location, supplying direct current for lighting equipment is a brand new mobile motor generator—product of Walt Disney Productions' Engineering Department. The 300 kilowatt motor generator set and control unit were built by Westinghouse from a full-scale mockup constructed by Disney technicians.

The motor generator has been in actual operation at Disney's Studio for some time, and also has been rented to other studios for location work. It has been entered in the appropriate category for a Technical Award by the Academy of Motion Picture Arts And Sciences for 1949.

Basically, the Disney design is said to improve previously existing apparatus in this field in mobility, flexibility, safety, sound-proofing, equipment protection,

Disney Engineers Unveil New Mobile Generator Unit

Operating safety and efficiency keynote design.

By RALPH LAWTON

simplified operation, compactness and appearance.

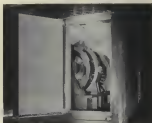
The trailer and transport unit are rugged enough to go anywhere on location where A-C power is available for transformation to D-C. The generator unit will deliver 300,000 watts—enough to produce 5,000 amperes for direct

current lighting for short periods. The trailer containing the equipment weighs 48,500 pounds, is enclosed in an all-aluminum body, and complies with all the recently increased State of California regulations for this kind of apparatus. Improved safety factors keyed the

(Continued on Page 66)



THIS OPEN VIEW of interior of mobile generator truck demonstrates of equipment. Apparatus was specially designed to withstand road shocks encountered in remote location work.



CAREFULLY engineered insulation of the motor-generator compartment is shown here, so also are the rubber insulation barriers on which the generator is mounted. Trailer weighs 48,500 pounds.



CHARLES ROSHER, A.S.C., made the first Mitchell camera to go into action in a Hollywood studio many years ago when he was Mary Pickford's favorite cameraman.



WHEN ARTHUR MILLER, A.S.C., received his first Academy Award, it crowned a long list of photographic achievements that began when, at a youth, he made and sold snapshots.



JOSEPH RUTTENBERG, A.S.C., got his basic training as a newspaper photographer and married cameraman M.G.'s new Great Britain's favorite director of photography.



From Still Photography To Cinematography

How early training in photography
opened the gate of opportunity to
Hollywood for these A.S.C. cameramen.

By FREDERICK FOSTER

OUR PREVIOUS historical accounts of the rise to success of some of Hollywood's foremost Directors of Photography has dealt mostly with those men who got into the business more or less accidentally, when movies were in their infancy. Some had little or no experience in photography. Whether these men were destined to become cinematographers is a matter of conjecture; but they had the artistic gift and the imaginative mind so necessary for success in the photographic art that it is reasonable to conclude such gifts would eventually find expression through the medium of a motion picture camera.

There are some, among the industry's top flight cinematographers, however, who did come into the business from the ranks of photographers—portraitists, pose photographers, and the like—and their very thorough early schooling in the fundamentals of photography and of lighting, composition, etc., proved an asset which was to give them considerable edge over many of their contemporaries in the early days of the motion picture industry.

Charles Rosher, A.S.C., who, during 1945, directed the photography on such M.G.M. productions as "Nephew's Daughter," "The Red Danube," and "Annie Get Your Gun," is one of these old master painters-with-light who was a renowned portrait photographer before taking up cinematography.

During his early youth, Rosher studied for the British diplomatic service, and clerked part time in the Consular department of the British Board of Trade. It was during this period that he took up amateur photography, and within a few years was exhibiting his work in British photographic salons, including those of the Royal Photographic Society. Besides taking many salon awards, his work was published in British photographic magazines. Subsequently he apprenticed himself to David Blount, famed British portrait photographer and founder of "The Linked Ring," exclusive photographic society in London. He studied fundamentals of photographic chemistry under Howard Farmer, a photographic pioneer and discoverer of many important photochemical formulas. Later, he became chief operator for Richard Speight, world renowned Court photographer of New Bond Street, London, whose clientele were the royal families and nobility of Europe.

A few years later—1908 to be exact—while visiting the U.S., Rosher attended a convention of the Photographers Association of America where he met George Eastman, also George Harris of

(Continued on Page 58)

KARL STRUSS, A.S.C., once a prominent photographic distributor, celebrated his 25th year as a cinematographer in the set of "Antony."

CONGRATULATIONS

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SECTION



EXCELLENT pictorial composition is self-evident in this pose still. Note how the photographer made use of the picturesque cloud formation as a backdrop for his subjects, then set his camera low for heightened dramatic effect.

How To Get Good Composition In Cine Photography

It's essential if you aim for professional results in your movie making.

By CHARLES LORING

COMPOSITION, as it applies to motion pictures, is a subject which too many amateur movie makers shun in the belief it is well over their heads and far too complicated to understand except by professionals. Not only is this untrue, but the serious cine amateur—before he can hope to progress to or approach the professional level of cinematography—must know composition and know it well.

This need not be a discouraging thought. It does not mean long hours spent in studying the elements of composition. Surprising enough, most serious filmers who are doing advanced work

with their cameras are fairly well versed in the elements of composition by virtue of a natural born artistic instinct, which is invariably found in the cameraman who loves photography. So we can skip some of the elementary stuff and jump right into a discussion of practical composition as applied to motion picture photography.

Personal composition for the screen differs from that employed in almost any other art form mainly because it is essentially fluid rather than static. By fluid we mean that it constantly changes as the camera and the elements of the scene move and change special relationship.

The moving camera—mounted on

crane, dolly or camera car—is in part and parcel of the moving picture. The camera should be free to move for the purpose of following action or emphasizing a situation. Similarly, players should be free to move within the frame so that the action will not be restricted. Some compositions in which the players dare not move for fear of disturbing the balance are deadly to the motion picture. One might just as well film a series of still pictures.

Screen composition, then, is a constantly changing thing—but it has its rules and can be controlled quite precisely through proper co-ordination of camera and action. The cameraman's one never-changing element in composition is the frame itself—a rectangle in 3 to 4 proportion into which everything in the picture must be made to fit. The cameraman must learn to look at every new scene situation in terms of how it will appear when set in a horizontal space of the above proportions.

The frame itself is a prime compositional element into which the other elements fit, and by moving the frame lens in relation to the subject any number of different compositions can be achieved. The cameraman can profitably experiment at times by trying different types of framing before actually shooting the scene.

The rule of "thirds" is a basic principle of composition in all of the graphic arts, but it applies particularly to motion pictures, especially in long panoramic shots which embrace a good deal of area and many separate details. In applying the rule, the cameraman must imagine that the screen is divided into thirds—both vertically and horizontally. For the most pleasing composition the most important details of the scene should fall at points where these lines intersect. Obviously, this is no hard and fast rule, nor should it be adhered to so literally that the action becomes static.

Usually a precisely centered or symmetrical composition lacks drama. In most cases it is better to shoot the subject from one side or the other in order to create some sort of emphasis. However, there are exceptions to this rule as well, for there are times when a completely symmetrical composition is artistically pleasing on the screen. This sort of arrangement is usually most effective as a background to action which follows a less regular pattern.

The horizon line is an element of
(Continued on Page 64)

TV FEATURES

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Filming Wild Birds in 16mm. Color

Periscope and burlap blind aid in securing rare films of bird life.

By F. C. MOULTRIE

HAVING MADE SIBERIAN ASSISTANT phonographs, commercial films and travelogues over a period of years, this writer decided recently to make a sixteen motion picture of wild bird life in color, assisted by a fellow cine amateur. We had read a great deal about the types of "blinds" used by other photographers and as a result equipped ourselves with a conventional type burlap shelter in which to conceal ourselves and our equipment.

We believe in using a rugged, rock-steady support for the camera. Therefore my friend, Belex was mounted upon an adapted wooden tripod which, though extremely heavy to carry through miles of bush and marshland, still remains an invaluable asset. When we decided to film our bird subjects, we had already entered upon the nesting-season for migratory birds in our part of the Continent, and we had no time to lose if we were to secure a good selection for our film record.

In the vicinity of the Great Lakes, where we are located, we are sometimes subjected to strong, gusty winds in late Spring and early Summer and, in spite of our determination to demonstrate the necessary degree of patience, the burlap sides of our blind would occasionally indulge in violent and uncontrollable flappings. What bird could retain its equanimity in the proximity of a strange, bulky creature with a rapidly pulsating and noisily flapping carcass? It is not surprising that a timid wild bird will often remain away from its nest hours, even a day at a time, when so confronted.

Nevertheless, in spite of this handicap, we succeeded in securing some very fine shots, though we were becoming more and more convinced that something better would have to be devised if our nerves were to survive the ordeal!

Even when using a 75mm. telephoto lens, it is still necessary to be quite close to a small bird if it is to fill a large enough area of the frame, and, with sun pouring down relentlessly on the exterior of the blind, there is enough discomfort from the heat and insects to try one's fortitude to the limit. Yet it is often required to remain quiet and still for hours at a time. In one case we had

to return to the same spot three days in succession before the timid little creature that was our subject would return to its nest. In another case, two full days of waiting were sustained. This, in spite of setting up dummy blinds each day as we left, in the hope the bird would become accustomed to its presence. With the imposition of such an "endurance test," it is extremely undesirable to have a bird frightened away at a critical moment through circumstances which,

we began to feel, might be corrected.

While muttering to ourselves for the hundredth time "Something will have to be done about this," we suddenly had an inspiration. We were now thinking more about our personal comfort far, in wriggling this way and that, we were adding to the capriciousness of the wind by prodding the burlap sides with head or elbows. It was here that we conceived the idea of using a periscope. This, we reasoned, should at least permit one to realize at comparative ease on the ground while watching for the bird's return by "remote control."

That night we constructed a simple periscope from cardboard and two mirrors from a ladies' compact. We also wished to control the camera from below. We were unable to purchase a long anonymous release locally, so, requiring something in a hurry, we constructed a very effective and foolproof triggering device from some springs, sheet Duralumin, which we actuated by pulling downward on a length of fishing-line. After thoroughly testing its operation, having fulfilled the requirement of ruggedness and infallibility, we duly set it up the following day and found that we were able to make ourselves so much more comfortable by its use and that it was now possible to remain still with much greater ease. It was a quieter day, too, and, when our bird returned he was clearly visible as we watched, unseen, through our periscope from near ground-level. The results were extremely gratifying and we congratulated ourselves upon having developed the "perfect system."

We were still plagued by the flapping burlap sides of our blind, however, and felt sure that our need for endurance was being unnecessarily prolonged by it. The terrain often prevented the use of one-pipe to provide additional security and on one occasion the wind blew so violently that the structure tilted out like a balloon and the entire outfit, camera and all, toppled over. Fortunately it was saved in time, but its setting had been disturbed and a new light-reading had to be taken, and general adjustments re-made.

(Continued on Page 84)



SAMPLE burlap "blind" shown here conceals only the camera operator. The camera, periscope, in set is actuated by remote control by the mounted operator who never subject appears within field of view of the lens, as observed by the periscope through the periscope, indicated by arrow.



AUTHOR'S specially improvised remote control and camera actuator is shown here, made from strips of spring Duralumin. The 16mm. Bolex camera is set to motion by a downward pull on the cord, and stopped when the cord is released.

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of AMERICAN CINEMATOGRAPHER'S 1950 AMATEUR MOTION PICTURE COMPETITION

This Handsome AMERICAN CINEMATOGRAPHER AWARD

In addition—six Achievement Awards!



Kathryn Grayson, star of M-G-M's forthcoming "The Tender Trap," graciously has our readers inspect the handsome American Cinematographer Award Film given to lucky winner of American Cinematographer's 1950 Amateur Motion Picture Competition.

Less than 30 days remain
to enter films!
Competition closes
midnight, March 1st!



RULES

• Each entry must be wholly amateur produced, except for any titles and film laboratory work. Any sound accompaniment must be recorded exclusively by the entrant or club submitting the film.

• Competition open to members of amateur movie clubs within the U.S. Clubs will evaluate and enter the best film, and best sound film completed by a member since January 1, 1950. Individuals (non-club-members) may also compete by submitting films to their local amateur movie club for entry at discretion of the club. Refer to your local camera store for name and address of local club, or write the Editor.

• Amateur movie clubs may enter films not to exceed 4, as follows:

- Best film, amateur-made film
- Best film, member-made film
- Best film, non-member film
- Best film, non-member film

• Film length limits: 16mm—800 feet 8mm—400 feet

• Entry Fee: \$1.00 per each subject submitted

• Each film reel as well as its container must be plainly and securely labeled with entrant's name and address plus name and address of club entering the film.

• All films must be shipped on reels and in cans to contest headquarters fully prepaid. Entry blank and fee should be mailed in advance of film. Films will be returned directly to entrant via Express collect, fully insured. Be sure to indicate value on your entry blank for which films are to be insured.

• Please indicate make and model of camera and the lens used in making your picture, also brand of film used. This information will have no bearing on evaluation of films, but is desired by judges for reference.

• All entries must be submitted before March 1, 1950. Send for your entry blank which may be obtained by writing The Editor, American Cinematographer, 1782 No. Orange Drive, Hollywood, Calif.



LIKE OLD TIMES—Fellow A.S.C. members and old-time associates gathered in Hollywood recently to honor Fred W. Jackman, executive vice-president of organization. Encircling the meeting at an old silent-dope movie are (standing, left to right) Mack Bennett, Hal Roach and Jackman. Seated are Charles G. Clarke, A.S.C. proxy and Jack Warner.



CHARLES G. CLARKE presented commemorative plaque to Fred Jackman, honoring his many years service to members of the A.S.C.



MACK BENNETT laughed when told by Hal Roach (left) here he and Fred Jackman made their first motion picture together, using negative loaned from Bennett.

Fred Jackman Feted By A.S.C.

More than one hundred and fifty members of the American Society of Cinematographers and their friends gathered together at the Society's clubhouse in Hollywood, the night of January 11th, to honor Fred W. Jackman, Executive Vice-President and Treasurer of the organization.

Ordinarily the man who arranges the Society's festive affairs each month, Jackman had the tables turned on him in what proved a surprise dinner in his honor arranged by A.S.C. President Charles G. Clarke.

Several of Fred Jackman's early assignments were on hand to pay him special honor, including Mack Bennett, who Jackman served for many years as cinematographer; Hal Roach, Jr., for whom he photographed Harold Lloyd comedies and feature films; and Jack Warner, of

Warner Brothers Studio where Jackman installed one of the first and finest trick effects departments in the industry.

President Clarke paid tribute to Jackman for the many services he has performed for the Society in the 30 years he has been a member, and in behalf of the members of the A.S.C. presented Jackman with an engraved plaque commemorating this service. Engraved on the plaque is the following inscription:

"Presented To Fred W. Jackman in appreciation of his many years of faithful and untiring devotion to the interests of members of the American Society Of Cinematographers—January 11, 1950."

Another gift was an old time Pathé motion picture camera, a fitting memento of bygone days when Fred Jackman operated a replica of this camera for Mack Bennett and Hal Roach. The camera,

complete with tripod and a "mag" slate, suggesting it had been used in filming "The Great Train Robbery" at turn of the century, was the gift of Cliff Thomas, head of Hollywood Camera Exchange, Ray Ferrerera and Virgil Miller donated up old-time props such as puttees and visored cap—regulation attire for cameramen in those days.

After the presentation, a reel of film was screened showing some examples of Jackman's famous trick photography, which highlighted Mack Bennett's early-day Keystone comedies.

Fred Jackman was first elected president of the A.S.C. in April, 1941, and served two terms. He was again elected to this office in 1947, served two terms. He was elected Executive Vice-President and Treasurer in 1948—a post he has held continuously ever since.

Lee Garmes To Film TV Series

An organization made up of former David Selznick personnel, including cinematographer Lee Garmes, A.S.C., and headed by William Dietele, veteran film director, will produce television films exclusively for Don Lee's Hollywood television station.

Films of half-hour length will be produced for telecasting over KTSL and also will be syndicated to other TV stations in the U.S.

More Cash For Television Films

An encouraging note for producers of television films is word that Procter & Gamble, soap manufacturers, influenced by the steadily increasing sales of television sets nationally, is now paying \$5000 per film for the ten TV films made under sign of Bing Crosby. In comparison, company is said to have paid only \$1750 for each of the 52 films it bought last year, and it is estimated they'll bid to \$7500 each for others before end of year.

BOH President Honored By National JC's

The United States Junior Chamber of Commerce, representing 1800 local Junior Chambers of Commerce and over 150,000 members, has announced the selection of Charles H. Percy, 30, President of Bell & Howell Company, as one of the Ten Outstanding Young Men of the Nation during 1949. Percy, head of one of the country's leading photographic equipment manufacturers, was the only businessman chosen this year to receive the award. He was presented with the Distinguished Service Award Key and Scroll of Honor by Paul G.

Hoffman, ECA Administrator, at an award banquet held in Peoria, Illinois, January 21, 1950.

The award is presented annually to the ten men between the ages of 21 and 35 "who have won outstanding success in their fields and have advanced the welfare of the people on a national level." Perry was the joint nominee of the Junior Chamber of Commerce of both Evanston (Ill.) and Chicago. Contesting on his nomination, Lem H. Tate and Laurence C. Buckmaster, spokesmen for both organizations, said: "Chuck Perry was the unanimous choice because his achievement is an example of the finest kind of business leadership that young men of our generation are capable of furnishing."

Alfacolor—New British Color Film Announced

Meeting the demand in England for a 16mm color film suitable for both amateur and commercial purposes is the Alfacolor system recently introduced by the Alfa Laboratories Ltd., 72 Wardour St., London. Alfa color is a backup system which is three-color developed.

Processing of 35mm. Alfacolor begins this month at Alfa's new laboratory recently constructed at Redhill, Surrey. The company expects shortly to announce its new negative-positive color process for 16mm.

Pioneer East Coast Studio Dismantled

The old pioneer Filmmark Studio in New York has finally gone dark after almost a half century of continuous operation. Originally known as the Edison Studios, the black long six story structure gave birth to many of the early movie genres and was the proving ground for present day Hollywood techniques.

Paramount, Universal, Audio Productions, Columbia, Soundmeters and many independents frequently used Filmmark's facilities, but the volume of Eastern production never quite succeeded in keeping the studio busy after the war. For several years J. A. Tanner, head of S.O.S. Cinema Supply Corp., who handled the property for the former Mills interests, attempted to find a suitable successor.

Tanner has moved hundreds of spotlights, cameras, dollies, ladders, jacks, handtrucks, background projection equipment, cameras, Selsyn motors, sound playback, microphone booms, etc., to his own warehouses in Midtown Manhattan where the equipment is now being offered for sale.

Nominees For 1949 Academy Awards For Cinematography Announced

Fox Camaraman lead list with a total of six nominees

Final nominating ballots went into the mail January 28th, addressed to all Directors of Photography in Hollywood, following the special screening of the best of the twenty films nominated for Academy Awards for Cinematography from the preliminary list submitted by the cameramen early this year.

The titles of more than fifty black-and-white and color films were submitted for consideration, and that list was narrowed down to twenty—ten black-and-white and ten color—in the preliminary balloting.

The twenty films and the Directors of Photography who filmed them are as follows:

Black and White. "All The King's Men," by Burnett Guffy, A.S.C. (Columbia); "Champion," by Frank Planer, A.S.C. (United Artists); "Battle of Britain," by Paul Vogel, A.S.C. (M-G-M); "Come To The Stable," by Joseph LoSelle, A.S.C. (Fox); "The Fountainhead," by Robert Burks, A.S.C. (Warner Bros.); "Pinky," by Joseph MacDonald, A.S.C. (Fox); "The Heiress," by Daniel Fapp, A.S.C. (Paramount); "A Letter To Three Wives," by Arthur Miller, A.S.C. (Fox); "Prince Of Foxes," by Leon Shamroy, A.S.C. (Fox); and "Sands Of Iwo Jima," by Reggie Lanning (Republic).

Color. "The Barkleys Of Broadway," by Harry Stradling, A.S.C. (M-G-M); "The Blue Lagoon," by Arthur Ibbeson (J. Arthur Rank-U.I.); "Jolson Sings Again," by William Snyder, A.S.C. (Columbia); "Little Women," by Charles Schoenbaum, A.S.C. (M-G-M); "Look For The Silver Lining," by Everett Marley, A.S.C. (Warner Brothers); "Red Canyon," by Irving Glassberg, A.S.C. (Umar-Inc.); "Oh, You Beautiful Doll," by Harry Jackson, A.S.C. (Fox); "The Red Pony," by Tony Gaudio (Republic); "Sand," by Charles G. Clarke, A.S.C. (Fox); and "She Wore A Yellow Ribbon," by Winston Hoch, A.S.C. (Argon).

Again this year, Twentieth Century-Fox leads the list with a total of six nominees. Metro-Goldwyn-Mayer is next with three and Columbia and Warner Brothers tie for third place with two each.

Result of voting on the ballots now in the mail will narrow the above list down to five black-and-white and five color films, from among which members of the Academy of Motion Picture Arts

and Sciences will select the best film in each class and prepare a gold "Oscar" for its photographer.

The winning Directors of Photography will not be announced until the night of the Annual Academy Awards presentation, which will take place this year at the Hollywood Pantages Theatre, the evening of March 23rd.

New Light Balancing Filters Announced

Four new filters which extend the power series of Kodak Light Balancing Filters (yellowish) have been announced by the Eastman Kodak Company. These filters, Nos. 81a, 81b, 81c, and 81d Kodak Light Balancing Filters, will be available from Kodak dealers in 2- and 3-inch gelatin film squares. The 81a and 81b will be available within the next few weeks on Series V and Series VI Kodak Combination Lens Attachments.

As in the case of the Kodak Light Balancing Filters Nos. 81 through 81n, each of the new filters lowers the effective color temperature of the exposing light about 100° K. more than the preceding number of the series. With the complete series, photographers will now be able to select precisely the correct light balancing filter for use with various color films and different types of flash lamps. Combinations of filters can be used to meet special requirements.

Those Russians—What Inventors!

Russia now claims for discovery, among other things, that it is the "birthplace of motion pictures." An International News Service report stated recently that a Soviet newspaper has credited Russian scientists with the development of film itself, invention of the first movie camera and the first to use the "fadeout." Another Russian publication credited the Reds with being the first to create both negative and positive film, first inventors of color film and the first to introduce sound films.

Universal-International Adopts Magnastic Recording

Universal International joins the parade of major studios turning to magnetic tape and film for sound recording of pictures. Studio's experiments in magnetic recording of sound sequences reached a new high in effectiveness during the filming of location scenes for "Outside The Wall."

FILMING A TRIP TO THE MOON

(Continued from Page 46)

4, was a vast exterior representing the spot on the moon's surface where the scientists land with their rocket ship. Here the best scene artists Hollywood can produce worked with art director Fayette in re-creating what is considered the present day terrain and landscape of the moon. All the while this vast set was being constructed, cinematographer Lindon worked closely with the scenic artists and with the famous astronomical painter, Chesley Bonestell, who aided in the set design, that his lighting should match that pointed on the vast backdrop covering the stage on three sides.

On another stage were constructed sections of the space ship where most of the action of the picture takes place. Here the intrepid scientists were to undergo new and startling experiences, as the ship entered the vacuum far beyond the gravitational pull of the earth—such as floating in space and the ability to walk up the walls and on the ceiling of their compartment in the space ship, much the same as flies. Powerful magnets attached to the soles and heels of the men's shoes, according to the script, afforded them this strange new power.

In another sequence the four scientists, in heavily-padded suits and helmets, emerge from their compartment within the ship during its flight to inspect a jammed radar antenna. On the screen they appear to exit from a port on the under side of the ship as it tips through space, walk out on the ship's surface, heads down, then walk in their magnetized shoes around the sleek streamlined body—like human flies—until they are seen on top.

For all these scenes, Lindon was aided by several pieces of unique camera equipment and by ingenious engineering of the sets. The first set described above—that of the space ship interior—was built to rotate both vertically and horizontally. Thus, to photograph the men walking up the walls of the compartment, the set was simply turned over on its side, and the men performed normally.

Lindon's camera was mounted on a large crane. Position of the crane was never moved in order to get reverse shots or change in camera angle. Instead, the set was revolved a quarter or half turn, a section of the wall removed, and the action photographed.

To create the illusion of the men walking upside down like flies on the belly of the ship, in the second scene, Lindon employed a unique rotating camera base. Shown in the photographs, the apparatus permitted turning the camera upside down to photograph the men walking

normally on top of the ship. To catch the men coming up over the side, the camera was stopped and turned right side up, then the ship was rolled over and the men filmed walking normally, as before. The illusion was completed through deft cutting of the film in the editing.

Another interesting sequence takes place when one of the men decides to walk aft on the ship to inspect the rocket tubes, which were thought to be damaged in the takeoff. In an unguarded moment, the man releases his shoe magnets from the ship's metal surface and falls off into space. But instead of dropping out of sight into the vast void, he simply floats in space like a cork bobbing in water. You see, he's beyond the gravitational pull of the earth, in vacuum. The story provides for a spectacular rescue by one of the astronauts, who secures an oxygen tank from within the ship, wraps his legs and arms around it and projects himself into space by opening the valve in the oxygen tank. The tank then acts something like a rocket—the escaping oxygen pushing it through space with its passenger.

Thus propelled through space, the rescuer reaches his drifting pal, takes him aboard, and, pointing the oxygen exhaust tube in the proper direction, is propelled back to the space ship.

Imaginative? You bet! But, according to scientists, all this easily could take place in the void far above the earth. Here again, Lindon's resourcefulness was called upon to make this action as real as eating breakfast. First there was a problem to overcome. Because this was a Technicolor picture, powerful lighting was required on the set and this precluded suspending the drifting actor by means of "invisible" wires, because the wires would show up in close shots. So Lindon resorted to an old trick—covered a camera dolly with black velvet, placed the actor upon it, and filmed away with the camera set low to catch the airy background.

For additional shots of this same action, he set a stout plank from the end of the camera boom, placed his actor upon it and focused the lens so it would just miss the improvised support. For additional scenes, the studio, overnight, constructed a sturdier boom of tubular steel, made it telescoping and provided a small padded seat for the player, and the action was completed the following day.

Lindon's biggest lighting problem on the moon set was keeping the atmosphere crystal clear, as scientists say it is on the moon. The arc lamps were a constant

source of blue smoke and it was necessary to keep huge exhaust fans working, all the ventilators going, and all stage doors open in order to keep the atmosphere clear.

Another problem were the dimly-lit stars in the background of the set. These were small automobile headlight bulbs—between 1700 and 3000 of them—suspended on small wires from the stage ceiling. Each lamp was wrapped with a piece of filter gel to make its light appear white in the Technicolor camera. Because the gels would fade from the lamps' heat over a short period of time, Lindon said, they had to be replaced twice daily—at noon and again at night after the day's shooting had been completed. The wiring for this network of "stars" amounted to over 70,000 feet!

From the very start, producer George Pal insisted that the picture must not have anything vaguely suggesting fakery. For this reason he employed as technical advisers some of the best scientific brains currently studying space ship engineering and navigation, and experts in astronomy—and, of course, Lionel Lindon to translate their unified conception into visual reality through the medium of Technicolor photography. "Demonstration Moon" is high on the "must" list of pictures to see during 1956.

STILL PHOTOGRAPHY TO CINEMATOGRAPHY

(Continued from Page 50)

the famous photographic firm of Harris & Ewing. Harris, who knew of Rosher's reputation as a photographer offered him a job as operator which he accepted. It was while he was employed here that Rosher became interested in motion picture photography. He bought one of the old Williamson cameras and now devoted much of his time to shooting news events, which he sold to various news-reel companies. This led to a meeting with William and David Hersley, heads of the old pioneer Contour Film Company in Bayonne, New Jersey, who hired him as a cameraman and sent him out to California in 1921 to their Hollywood "branch"—the old Nestor Studio—the first in California, incidentally, located at the corner of Sunset Blvd. and Gower Street, where Columbia Broadvision Company's studio now stands.

When Universal Studios were completed, Universal took over Nestor and Rosher moved his camera out to the valley lot to become one of Universal's first cameramen. Subsequently he went to Mexico to film the activities of the real Pancho Villa, and when he returned to Hollywood he joined the Jesse Lasky Feature Film Company which later be-

came Furzen Planets Linky. There Roster met Mary Pickford and began an association with the famous star that was to last more than a dozen years. Directors and leading men might come and go, but for years—right up to her retirement—no one but Charles Roster was trusted to photograph the First Lady of Hollywood. When Miss Pickford spoke at the dedicatory ceremonies opening the George Eastman House, in Rochester, New York, recently, she credited Roster with being the first cinematist to use artificial light as booster illumination for exterior shots. He is also credited with being the first to use arc spotlights for key lighting. Generally considered one of the few masters of things cinematic, Roster remains, nevertheless, an avid student of photography. One of the founders of the American Society of Cinematographers, Roster is also a Fellow of The Royal Photographic Society, and an Associate of the Photographic Society of America.

Karl Struss, A.S.C., is another of Hollywood's camera men who had built an impressive reputation as a portrait and commercial photographer before taking up cinematography.

Karl Struss began his study of photography as a pupil of Clarence H. White in 1908. In 1912 he graduated and took over White's studio on West 31st Street in New York City. At first, Struss set himself up as a portrait photographer. Then he switched over to magazine illustration and advertising photography, which was then just beginning its tremendous progress. When World War I broke out, Struss joined the service and became an instructor in aerial photography in the army air force. When the war ended, Struss logically enough went to Hollywood. First he got a job as still photographer with Cecil B. De Mille. In three months he was promoted to a motion picture camera as a second cinematist. In 1927, when sound came in, Struss was elevated to director of photography.

With the possible exception of technicians, every conceivable type of feature production has flowed through his camera. He has gone from DeMille spectacles to out-and-out horror dramas in both black and white and Technicolor. Last month he completed the photography on a feature production based on the life of a circus owl.

Karl Struss made the great change from pictorialist to motion picture photographer smoothly, and developed into an undoubted and widely recognized leader in his field.

Many of the industry's top cinematographers rose from the ranks of press photographers, too. Take Joseph Rutenberg, A.S.C., for instance. Rutenberg

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began his photographic career as a camera reporter for Hearst's "Boston-American." Joe started with the "American" as a copy boy, then was promoted assistant to the head of the photographic darkroom. He hadn't been on the job long when a big news story broke suddenly. A big ocean steamer had crashed on the rocks down the coast and all the newspaper's cameramen were rushed to the dock to photograph survivors as they landed, and especially to buy up any snapshot films that had been exposed at the scene by surviving excursionists. Joe was left in charge of the darkroom. He tray-developed over 300 rolls of amateur films that night, in addition to the plates sent in by the paper's still men, and made hundreds of prints. As a result of his amateurism, he was soon promoted to a full-fledged press photographer.

Ruttenberg spent eight years with the "American," then opened a successful portrait and commercial studio of his own. After a few years at this work, the movie bug began to bite Ruttenberg and he bought an old movie camera with the object of shooting newsreel material. He built his own film developing laboratory and for a year or more he photographed and produced a local newsreel for the Loew theatres in the Boston area. This provided him with a thorough grounding in the fundamentals of motion picture photography, for the project gave him experience in film developing and printing, editing and title making, in addition to photography.

By now, Joe felt he was ready to photograph feature films and headed for New York in quest of a job with one of the eastern studios. After a prolonged period of going from studio to studio, the break he sought finally came when the Fox East Coast Studio succeeded him to fill an assistant cameraman's job. He wasn't an assistant long, though, for within a short time the first cameraman resigned from the picture, and Joe was asked if he felt he could carry on and finish the picture.

He felt he could, and proved it by finishing the picture in such fine style that from then on he remained a First Cameraman. Years later he moved to Hollywood and was signed by Warner Brothers as director of photography. Winning an Academy Award for his photography of "The Great Waltz," he went on to duplicate the feat with the photography of "Mrs. Miniver," in 1942. He is currently shooting "The Miniver Sequel" in London for M-G-M.

One cannot recall "How Green Was My Valley," "Song Of Bernadette," and "Anna And The King Of Siam," without remembering the impressive photography of each which netted Academy

Awards for the best black and white photography for Arthur Miller, A.S.C. Miller has no claim to a background of press photography or portraiture. Rather he was a "ham" or advanced amateur with a yen to make snapshots. Early in life he developed two absorbing interests—fine horseflesh, and making pictures photographically. He became a jockey, but wherever he raced he always managed to have an improvised darkroom in one of the stables. In off moments he'd snap pictures of the horses, jockeys, the trainers, and others. Between races he'd develop and sell them—three points for fifteen cents! It wasn't a profitable venture but it settled enough to enable him to buy more materials and equipment.

Then fate stepped in. An accident occurred that ended his career as a jockey. When he recovered he learned that his stable rented horses to a group of people who made moving pictures. He wangled the assignment of taking horses to the studio for their day's work. He fell in love with the big movie camera, and made up his mind that one day he'd become a motion picture cameraman. As soon as he'd gotten sufficiently acquainted with Fred Balshofer, the cameraman, he asked for a job and was put to work in the laboratory.

"That was the pathway to a camera job back in 1906," says Miller, "and believe me it put me through a real course in practical photography. I began in the room where they perforated the film, then went up as assistant in the negative developing room. I learned to treat and tint film—a vogue in those days—and how to mix developers for negative and positive film. The next step was the printing room."

When Miller finished his apprenticeship as the lab, there was no such thing as an assistant cameraman. "When you landed a camera job in those days they simply handed you a camera and you went out and did the job," says Miller. One of his earliest and best remembered films was "The Perils Of Pauline"—a serial; and while it was not his first, it was very close to it. Because of the thorough training received in Balshofer's lab and his own inherent instinct for photography, Arthur Miller made good as a cinematographer from the start.

There are others, of course, among the directors of photography of Hollywood, who also were skilled photographers before succumbing to the lure of the movies, and whose early experiences make equally interesting reading. But their stories remain to be told in another article.

PRODUCING FILMS FOR TELEVISION

(Continued from Page 47)

sity occur. This effect is particularly noticeable when the dark areas occur near the lower and right borders of the picture area, and has the same appearance as the flares of light sometimes seen in projecting processed several motion picture film which has been edge-fogged due to heat camera spoils. It is difficult to state in simple terms the value of density at which this effect occurs, since it depends somewhat on the arrangement of the subject matter and the extent of shading control introduced by the monitor operator in the transmission of the picture. A statistical study of the problem would no doubt reveal a value for the maximum density, which, on the average, it would not be desirable to exceed. It is reasonably certain, however, that much less of this trouble will occur if the recommendations regarding density range compression are followed. The maximum diffuse density of a motion picture print made on Eastman Fine Grain Release Positive, Type 1302, intended for theater projection seldom exceeds 2.40. If, as recommended above, the density range is compressed by at least 0.3 for the television print, then the maximum diffuse density for the latter would be 2.10 or less. From practical photo-

graphic work using the reduced lighting contrast recommended below, it is indicated that prints which are satisfactory for television transmission might have a maximum diffuse density (for the deepest shadow) of about 1.6 to 1.7 and a minimum (highlight) density of about 0.09 to 0.15 including fog. These values are for prints made on Eastman Fine Grain Release Positive, Type 1302, for a Type 11B Spectrometer control gamma of 2.2 to 2.5.

As stated above, the edge-flare effect is much more noticeable when dark areas occur near the lower and right borders of the picture area. Care should therefore be exercised in the design of sets and in the lighting technique to avoid this condition wherever possible. The so-called "edge lighting," often employed for the sake of dramatic emphasis, generally results in these conditions and therefore is not usually desirable.

For those who are familiar with the lighting technique employed in color photography, the lighting of sets for making television films should offer no serious problems since the requirements are very similar. The balancing light used to com-

*Type 1302 for 15mm Safety Film and Type 1304 for 16mm Film

and contrast, usually referred to as the "fill-light," should give an illumination level having a definite ratio to the "key-light." The "key-light" is that light source used to illuminate the highlight areas of the subject of greatest interest and this area is the one on which the exposure is based. Typical lighting setups showing the placement of the key-light, fill-light, and auxiliary-lights in relation to the subject and camera were shown in Figures 1 and 2 on page 12 of the January issue. The ratio of fill-light to key-light illumination may be conveniently measured by means of photoelectric exposure meters, which are equipped to measure footcandle light. Such meters are used at the position of the subject and are pointed at the light source. When measurements are made in this manner the ratio of fill-light to key-light so determined is called the *lighting contrast*. The key-light level should be checked after all fill-lights have been arranged. The ratio should be the same as that used in exposing color reversal films, namely, about 1 to 2, and should seldom exceed 1 to 4.

It should be noted that the term "lighting contrast" is not synonymous with the term "subject contrast" or "subject brightness range." The true subject contrast or subject brightness range is usually much higher than the lighting contrast, since it takes into account the different reflectances of the various elements of the scene. It can be measured accurately only by means of a flare-free telescopic type brightness photometer, which measures an extremely small area and which allows the instrument to be situated at a sufficient distance so as not to obstruct any light falling on the subject. These instruments, however, are usually only available for research work demanding measurements of the utmost precision. As a practical approach to the problem, it is possible to make reflected light readings of various areas of the scene with exposure meters which are equipped for making reflection measurements. The readings obtained with these meters do not, of course, give a measure of the true subject brightness range because of the greater angular response of the meters and because of the possible creation of shadows in making the measurements. Such reflected light readings are nevertheless very useful in roughly determining whether the various areas of the subject will be correctly rendered by the photographic material. When reflected light measurements of the lightest and darkest areas of greatest interest are made, the ratio will depend not only upon the lighting contrast but also upon the color of the areas measured, upon their reflectances and upon their surface textures. The ratio will vary, therefore,



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for different subjects, but for most subjects it should be less than about 1 to 30 when the lighting contrast has been properly adjusted to a ratio of 1 to 2, and not greater than 1 to 4. If the reflected light reading ratio is greater than 1 to 30 then the lighting contrast should be reduced to bring the former within the proper limits.

In photographing outdoor scenes, the lighting contrast is most difficult to control, but a great deal can be done with the aid of reflection to reflect light into shadows, thereby reducing the contrast. For this purpose "hard" and "soft" reflectors can be used. Aluminum paint, tin foil, pure white cardboard, and sometimes mirrors are employed. When aluminum paint is used on a smooth surface, it provides a "hard," mirrorlike spot of bright light. When used on a rough surface, it provides "soft" diffuse light.

The exposure should be so adjusted as to obtain a negative silver density (not including base density) for the deepest shadows between approximately 0.3 and 0.25 when the negative material has been developed to the normal gamma of 0.50 to 0.70. With the lighting contrast recommended, this negative will, of course, have a lower density range than a normal motion picture negative and this fact should be kept in mind in making any visual estimates of it.

A variety of film types are available for use in television studio photography. The following materials provide a wide choice in film types, each designed to fulfill the requirements for different situations and characteristics. Technical data on any or all of these materials will be supplied by the Eastman Kodak Company upon request.

13mm NEGATIVE TYPES

Eastman Background X Panchromatic Negative Film, Type 1230

Eastman Fluor-X Panchromatic Negative Film, Type 1231

Eastman Super-XX Panchromatic Negative Film, Type 1232

16mm NEGATIVE TYPES

Eastman Panchromatic Negative Safety Film, Type 3240

Eastman Super-XX Panchromatic Negative Safety Film, Type 3241

16mm REVERSAL TYPES

Eastman Fluor-X Blue Base Reversal Film, Type 1294

Eastman Super-XX Blue Base Reversal Film, Type 1297

Eastman Kodak Super-X Panchromatic Safety Film, Type 1298

Eastman Kodak Super-XX Panchromatic Safety Film, Type 1299

16mm COLOR FILMS

Kodachrome Film, Daylight Type, 3465

Kodachrome Film, Type A, 3466

Kodachrome Commercial Film, 3468

It is not to be inferred that the recommendations contained herein represent the ultimate techniques which will be followed in the future. Instead, they represent the best information which can be given in the present state of flux of a rapidly expanding industry.

TOUGH ASSIGNMENT

(Continued from Page 48)

for the spot. There, high on a mountain top, was a scenic vista looking like a page out of a travel folder, and dotted with high buildings. We peered down into a green valley with white ranch houses gleaming in the sun. And in the distance was a shimmering lake to complete the picture. Here was truly a cameraman's dream.

But like the pioneers and explorers of old, we were to discover that there is a price to pay for the privilege of enjoying such an unusual and beautiful spot. As we descended the mountain we contemplated the herculean task that would be involved in getting camera equipment, cast, crew and the herd of horses to the location. We were to experience this task a few weeks later when our first shooting day arrived.

First it became necessary for the studio to build ten miles of graded road to enable us to drive as close to the location site as possible. The road, incidentally, proved beneficial in another way a few days later when an airlines passenger transport crashed in fog near our location site, and enabled fire and

ambulance crews to drive rescue equipment within 150 feet of the crashed plane.

From the "end of the line," as we called the terminus of the makeshift road, it became necessary each day for the crew to haul our camera equipment up over the rugged terrain to the mountain top. For this they used pack animals. Cast and crew hiked to and from the location site daily.

The script called for a series of running inserts with mountains in the background. There was no semblance of a road on the mountain top, so it became necessary for the studio to build one. For this they required a bulldozer and a tank-truck of road oil for laying the dust. These had to be pushed and pulled up the side of the mountain by means of a giant tractor. After that, the camera car was brought to the top by the same method.

From the very beginning we realized it would be too difficult to work with the huge Technicolor camera in this locale. So we decided to shoot the entire picture in Monopack, using a Mitchell

camera without blimp and only the lightest of camera tripods. Also, it was impractical to use either booster lights or sunlight reflectors in most of the shots, because of the lack of flat surfaces and the difficulty of bringing a generator up far enough to supply current, and so probably for the first time since the advent of sound pictures, an outdoor epic was shot almost entirely without benefit of booster light of any kind—no mean challenge in itself, considering we were shooting in color.

Try and visualize shooting on endless rocky terrain without the aid of booms or parallels; where the tripod must be held in place by the weight of members of the camera crew; and where a slip of a tripod leg would send a valuable camera and possibly members of its crew hurtling over a cliff to certain destruction. These were some of our problems every day for fourteen days. Many shots were made with the camera and operator or myself suspended from cables over the side of a cliff. Because it was essential that I line up each shot through the camera, it often proved more practical for me to remain and operate the camera, rather than risk moving it to trading places with the operator.

Many times, because of the nature of the terrain and because of the difficulty in finding a suitable spot to set up the camera, composition had to be sacrificed to some extent and dependence placed on the natural setting and the color asperities of the Monopack medium to give us desired pictorial results. One thing I constantly strived for was a genuine "natural" result in the colors, avoiding harsh reds and other extremes. I used no filters at any time other than the regulation 114-A, which is always on the camera, indoors or out, when shooting Monopack.

We had but one day of the fourteen when the atmosphere was clear. The rest promised haze in varying degrees. But with Monopack, haze is no obstacle and in this instance it was a distinct advantage to the photography. I feel that in some of the scenes, it was the haze which created the beautiful pastel tones and genuine deep purple in the mountain shadows late in the day. It was gratifying to have negative reports come back from the laboratory indicating that an entire day's shooting, consisting of from 30 to 40 setups, was okay with respect to negative balance and photographs. I mention this because of the necessity for a balanced negative with Monopack—especially when there is a delay of three or four days before the cinematographer can see his pilot strips or view the black and white prints.

To enhance our colors, it became necessary to resort to artificial coloring, both

in the scene, settings and in the house used in the scene. To give a pictorially pleasing green color to the parched grass, the studio sprayed the grass with a vegetable dye, harmless to animals. The studio art department also touched up the rocks to provide a more convincing background for the Palomino horses. In all, 15,000 gallons of paint were used. To shoot scenes in a nearby canyon, which had been ravaged by fire several months earlier, it became necessary to remove charred brush and to repaint remaining tree stumps their natural color and add branches and green leaves.

The equine star of the picture—world-famous Palomino, "Harvester"—valued at nearly \$500,000, had both a stand-in and a double, and the stand-in and the double also had doubles. The cult, which played a prominent part, also had a stand-in and a double—and there were doubles for them, too!

Because of the necessity for switching from one animal to another from time to time, we had a special makeup man whose job it was to match color and markings on the horses and colts. The studio hairdressing department provided special dyes to color the horses' manes and tails.

Not a single studio-built interior was used in the picture. Every scene, every take, was staged in a natural locale. The only artificial construction was a rough rail fence erected along the hastily constructed road already described. The only interiors that were in a barn; and the only artificial light used in making the entire picture was in the barn lanterns and a night sequence filmed in front of a ranch house. The rest of the picture was shot in sunlight.

The filming of "The Palomino" marks the first time any motion picture company has worked in this mountain location. Some men ask why background players weren't used instead of working against such difficulties. But producer Robert Cohn has an answer for that: "It would have been more costly and the results wouldn't have given us the genuine appearance of sonic vistas so essential to the story."

Despite the hardships and obstacles encountered, we surprised the studio by winding up the picture in 34 days and within its budget—a record for a Monopack feature production. It stands as a credit to a fine crew which went to remarkable ends to insure its success. Students of the camera will find it interesting for the color photography and particularly because it was filmed for the most part under conditions similar to those encountered by the non-professional: bright sunlight, a natural locale and no artificial lighting aids. END



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if coming from Page 141

The S curve is a compositional element that is as old as Art itself. From the most primitive cave pictographs down to the most modern advertising art, the line appears again and again. On the screen the S curve is no less effective, especially in long shots or landscape backgrounds. A winding river or road curve in the shape of an S will form a perfect compositional motif for a scene. Carrying the principle a bit further, the S curve can often be introduced into the design of interior sets. Remember that

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the eye tends to be led along this curve so it is better to have the curve lead toward the focal point of action whenever possible. The S curve can also be used most effectively in the grouping of players within the scene—especially in mass ensemble shots. In such a case the arrangement should not be too precise or it will appear artificial on the screen.

In the more modern, discussion of screen composition the term *juxtaposition* crops up repeatedly. Used in this sense it refers to two consecutive scenes differing in meaning, but similar in compositional form. For example, an effective transition between two sequences might be achieved by dissolving from a close-up of a spinning automobile wheel to a close-up of a spinning roulette wheel. In this case the similar compositional pattern provides an extra link between the two scenes. Juxtaposition tends to become art if it is thrown into the script merely for effect. Its use should be restricted to instances in which it can definitely add to the value of a transition or montage.

Close-ups of faces present their own compositional problems on the screen. The smart way to shoot them, of course is to set up a straight camera angle with the face centered on the screen. Rather than relying on this undramatic approach, however, it is often better to frame the face to one side, leaving another element of the scene balance the composition. If the face is portrayed as looking in a definite right or left direction more space should be left on the side towards which it is looking. Extreme close-ups, in which just a segment of the face appears, will be more effective if either the face or the camera is slightly tilted.

The matter of balance is as important on the screen as in any other type of

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composition, and it can be achieved by balancing players with other players or with static elements of the set itself. Very often, when these elements do not lend themselves well to balanced composition, masses of light or shadow can be used most effectively to complete the balance of the pattern.

We have spoken of juxtaposition as meaning a similarity in compositional pattern between consecutive scenes. Turning this principle around we come to the theory of opposing compositions in consecutive scenes, a device which can be quite dramatic. The drama is obvious when one visualizes two armies marching toward each other, and shot from opposite angles. Properly treated there is a natural conflict between the two patterns of action. However, even static objects can be made to oppose each other through the proper choice of angles and cutting.

Since juxtaposition for the screen is a fluid thing, it is quite permissible (and often most effective) to change not only the compositional pattern but the image size within the scene. This is done either by moving the camera toward or away from the subject or allowing the subject to approach or move away from the camera. In this way, variety and dramatic emphasis can be achieved without the necessity of cutting—thus permitting a fluid continuity from one composition to the other.

The framing of scenes with foreground objects is not a new principle of screen composition, but it is a most effective device and one which is rarely used to fullest advantage by the cinematographer. Besides providing an extra compositional element with which to work, the foreground object ties the main subject more closely to its surroundings and also adds depth to the scene.

The wide angle lens is the best friend of the cameraman who wishes to achieve more dramatic compositions. It is naturally a dramatic lens since its main characteristic is a foreshortening of the scene. Distances can be exaggerated as can the size and special relationships of various objects within the scene. Diagonal lines can be made to converge dramatically, and it is also possible to produce striking compositions in which a foreground object looms prominently before a significant subject in the background.

The choice of camera angle is most important in achieving powerful composition. The low angle (especially when shot with the wide-angle lens) tends to exaggerate the height of the subject, making it seem to loom into the composition. Thus it is especially effective in the dramatic or mystery type of film. In contrast, the high angle tends to minimize the size and importance of the

subject, giving the audience an emphasis, sense of superiority as it looks down upon the scene.

Third camera angles definitely find their place in the modern motion picture, especially in montage sequences and sequences which subjectively duplicate the point of view of one of the players. However, like all unusual techniques, it is a device which can be easily misused and the cameraman should guard against throwing in such weird angles unless they are properly motivated.

Composition for the screen is a technique unto itself. While an art background is a handy essential toward producing more effective visual patterns, it is not absolutely necessary. The screen or cinema cameraman with a flair for screen presentation can learn much by observing composition within the professional product, by trying out various approaches to sequences in his own filming, and by leaving his mind open to original and experimental techniques of filming.

MOBILE GENERATOR

(Continued from Page 49)

design and construction of this new equipment.

So perfectly insulated is the trailer, it can operate close to the scene of shooting without danger of sound recording equipment picking up interference. Soundproofing consists of 1/2" of 3/4" underlaid, sprayed on, two inches of fiber glass, 3/4" plywood, and 1 1/2" perforated Celotex. The motor-generator set is mounted on rubber pads to dampen vibration. The M.G. housing is so constructed it can be readily removed in event there is need to make adjustments or repairs.

Ample circulation of air cools the interior of this well-insulated motor room. A five-horsepower motor driving a dual's inlet blower delivers 11,000 cubic feet per minute, draws outside air from each side of the trailer, forcing it up under each machine and thence to exhaust ports at the top and rear of the trailer. Two inch Air-Mace filters cleanse the air at point of intake.

Safety to operating personnel was a paramount factor in the design and construction of the equipment. All doors are equipped with locks and all high-voltage compartment doors are interlocked with the control circuit in such a way that it is impossible to start the M.G. set if any doors are left open or unlocked. The set will automatically stop generating should any of the compartment doors be opened while the generator is running.

Proving that no matter where you are in the world—in the Arctic wastes or deep in the Belgian Congo—your copy of **AMERICAN CINEMATOGRAPHER** will always reach you, is a letter received recently from cinematographer Henry Goldstein, attached to the Information Service, Belgian Congo. He wrote:

"I'm on location taking shots in the jungle, some 25,000 feet of this and 800 stills—quite a job here in the hot weather. Yesterday I received the September issue of *American Cinematographer*. A native handled all day to bring it to me. It is the most interesting of all magazines in the motion picture industry."

The motor generator set is designed for operation on alternating current of 2300, 4000, and 4600 volts and 50-60 cycles. The motor is induction-voltage started, through a starting reactor, by means of high-voltage air contactors. This limits the inrush current to 200% of full load current. Starting time is 18 seconds at normal voltage.

Every modern method has been employed to insure protection of equipment. Thermal overload relays, connected in the control circuit and energized from current transformers connected in each of the six phase windings, protect the motor. Duty engineers explain that the advantage of using six current transformers is that the current remains equal in each phase group, regardless which of the three line voltages (2300, 4000, or 4600) is used in operating the motor. This eliminates necessity of having to change overload connections for operation on different voltages.

Each bearing on the M.G. set has a thermal relay, the contacts of which are connected to the safety control circuit and shuts the plant down in the event bearing temperatures reach the danger point. At the same time, a red warning light located on the control panel indicates which bearing is in danger.

The plant is equipped with five main fuses. These are used for phase reversal as well as equipment protection. The fuses are mechanically interlocked so only three can be closed at the same time. To insure correct rotation of the M.G. set, a reverse-phase relay was installed and connected in the control circuit so as to leave the control circuit inoperative unless the phase rotation is correct. Also, a ready-light located on the control panel indicates correct phase rotation.

The control circuit and the blower motor are fed from a special three-phase, air-cooled transformer with taps on the secondary and connected to selector relays which automatically select the proper tap to assure 230 volts for the control circuit and blower motor, regardless which high line voltage is used. The D.C. breaker is an electrically-operated air breaker with time delay and

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instantaneous overload trips, and cannot be closed until the M.G. set is up to normal speed. The hold-in coils on the larger contactors and breaker are operated on direct current, eliminating S.C. bars, and are fed from rectifier units associated with the control circuit. All breakers, contactors and transformers are of the air type, eliminating the use of oil. Temperature detector coils are embedded in the stationary windings of the two generators and motor, and are connected through selector switches to a temperature meter located on the control panel so the operator can read the temperature of the windings at all times.

The motor generating unit is entirely electrical controlled and all operations

are regulated from the control compartment. "Start" and "Stop" switches for the M.G. set, blower motor, and the "Open" and "Closed" switches for the D.C. breaker are mounted on front of the control panel with indicator lights associated with each switch. The control compartment is located inside the grader housing, in the front end. There is ample accommodation for the operator inside the compartment, and he is thus able to control the huge generator protected from the weather and against the danger of contact with high voltages.

Denser engineers are agreed that the unit represents a notable advance in the factors of safety and efficiency in studio mobile generators. END



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Current Assignments of A.S.C. Members



Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month

Columbia

• **BURNETT GUFFEY**, "One Way Out," with Glenn Ford, Broderick Crawford and Carl Benton Reid. Henry Levin, director.

Eagle-Lion

• **W. HOWARD GREENE**, "Deadfall" (LeMay-Templeton Prod.) with John Barrymore, Jr., Chill Wills, Lee Butler and Basil Ruysdaal. Alan LeMay, director.

• **LORNE LINDON**, "The Sea Sets At Dawn," (Sloman-Rathvon Prod.) with Sally Pary, Philip Shuman, Walter Reed and Lee Fredericks. Paul Skene, director.

Lippert

• **BENJAMIN KLING**, "Operation Hailift," with Tom Brown and Russell Hayden. William Berke, director.

M.C.M.

• **JOSEPH RUTTENBERG**, "The Mirror Image" (In Color—shooting in England), with Grace Garson, Walter Pidgeon, John Hodiak and Cathy O'Donnell. Henry Potter, director.

• **ROBERT SILVERSTEIN**, "King Solomon's Mines," (Technicolor) (Shooting in Belgian Congo) with Deborah Kerr, Stuart Granger and Richard Carlson. Compton Bennett, director.

• **ROBERT PLANK**, "Swimmer Stock," (Technicolor) with Judy Garland, Gene Kelly, Gloria DeHaven, Phil Silvers, and Eddie Bracken. Charles Walters, director.

• **HARRY JACKSON**, "Three Little Words" (Technicolor) with Fred Astaire, Red Skelton, Vera Ellen, Arlene Dahl, and Keenan Wynn. Richard Thorpe, director.

• **WILLIAM SKALLS**, "Kiss," (Technicolor—Shooting in India) with Errol Flynn, Debra Stockwell and Paul Lukas. Victor Saville, director.

• **WILLIAM SYLVESTER**, "The Toast Of New Orleans," (Technicolor) with Kathryn Grayson, Mary Lane, David Niven, James Mitchell, Norman Taurog, director.

• **PAUL VOGEL**, "Viva," with Hedy Lamarr, John Hodiak, James Whitmore and George Macraday. Joseph Lewis, director.

• **RAY JUNE**, "Crash," with Cary Grant, Jose Ferrer, Paula Raymond, Signe Hasso, Ramon Novarro, Antonio

Morero. Richard Brooks, director.

• **JOHN ALTON**, "Father of the Bride," with Spencer Tracy, Joan Bennett, Elizabeth Taylor, Don Taylor, Billie Burke and Leo G. Carroll. Vincent Minnelli, director.

MGM

• **HARRY NELMANN**, "Border Renegades," with Johnny Mac Brown William Fox, director.

• **WILLIAM SKENNER**, "Squeeze Dicks Katz," with Vera Vague, Jerome Davis, Phil Rinta, Virginia Welles. Jean Yarbrough, director.

Paramount

• **WILLIAM MELLOR**, "A Place In The Sun," with Elizabeth Taylor, Montgomery Clift, and Shelly Winters. George Stevens, director.

• **DANIEL FAPP**, "Union Station," with William Holden, Barry Fitzgerald, Nancy Olson and Jan Sterling. Rudolph Marm, director.

R.K.O.

• **HARRY STRAUSS**, "Edge of Doom," (Summit Goldwyn Prod.) with Dana Andrews, Farley Granger, Joan Evans, Robert Keith, Paul Stewart, Adele Jergens, and Harold Vermylen. Mark Robson, director.

• **JOSEPH WALKER**, "Come Share My Love," with Irene Dunne, Fred MacMurray, Andy Devine, William Desmond, Gigi Ferrenu and Natalie Wood. George Marshall, director.

• **WINTON HICH**, "Jet Pilot," (Technicolor) with John Wayne, Janet Leigh, J. C. Flippin, Paul Fix and Richard Roher. Josef von Sternberg, director.

• **HARRY WILD**, "Sons Of The Musketeers," (Technicolor) with Conrad Wilde, Maureen O'Hara, Alan Hale, Jr., Nancy Gates, Lewell Allen, director.

• **NICK MUSKARA**, "White Rose For Julia," (Westwood Prod.) with Robert Mitchum and Faith Domergue. John Farrow, director.

• **GUY RAE**, "Code 1," with Charles McGraw, Adele Jergens, William Talman, Steve Brody and Douglas Fowley. Richard Fleischer, director.

20th Century-Fox

• **ARTHUR E. ARLING**, "My Blue Heaven," with Betty Grable, Don Douglas, David Wayne and Jane Wyatt. Henry Kosler, director.

• JOE MACDONALD, "Outbreak," with Richard Widmark, Paul Douglas, Barbara Bel Geddes, Elia Kazan, director.
• LESTER WHITE, "Dark Challenge," (Thor Prod.) with Mickey Rooney, Beverly Tyler and Pat O'Brien. Tay Garnett, director.

• MILTON KRASNER, "Rawhide," with Tyne Power, Susan Hayward, Hugh Marlowe, Dean Jagger and Edgus Buchanan, Henry Hathaway, director.

• JOSEPH LASHELLE, "Where The Sidewalk Ends," with Dana Andrews, Gene Tierney and Gary Merrill.

Universal-International

• MAURY GERTZMAN, "Death On A Side Street," with James Mason, Maria Tucci, Dan Darvas, Rudolfo Acosta,

Margaretta Lee, Emma Rodden, Hugo Fregonese, director.

• RUSSELL METTY, "Rose Queen," retitled "Fanny," (Technicolor) with Diana Lynn, Charles Coburn, Charlotte Greenwood, Barbara Lawrence, Charles Drake, Frederick de Cordova, director.

Warner Brothers

• KARL FREUND, "Bright Leaf," with Gary Cooper, Jack Carson, Laurin Ball, Patricia Neal, Donald Crisp and Jeff Corey, Michael Curtiz, director.

• CARL GUTHEIN, "Scoria Center," with Ginger Rogers, Ronald Reagan and Doris Day, Solent Heuler, director.

• PEVERELL MARLEY, "Pretty Baby," with Dennis Morgan, Zachary Scott, Betsy Drake and Edmund Gwenn, Bretaigne Windust, director.

WHAT'S NEW

in equipment, accessories, service

Dissolver Price Reduced

Interesting news for owners of Cine Kodak Special cameras is announcement of Joseph Yoko, 5968 Santa Monica Blvd., Hollywood, that effective February 1st,



price of the Yoko Automatic Dissolver attachment for this camera will be reduced from \$54.00 to \$48.00. Device makes possible smooth, professional-like fades of equal length in making dissolves with camera.

New B&H Lenses for 16mm.

Bell & Howell Company announces a new series of seven lenses for 16mm. cameras, of which four are ready for delivery. Series is first with uniform-step magnification, extremely high correction, new focal lengths, T-stop, and new design are other characteristics. Complete description and price of lenses may be had by writing the company at 7100 McCormick Rd., Chicago 45, Ill.

Splicer Heater

Splicers of Grinwald, Bell & Howell, Ampco and the rubber-lined Hollywood splicers may be converted to professional-type splicers by the addition of the Ariel Splicer Heater, easily attached to any of the above mentioned units. Heater

operates on 90 to 120 volts AC. Heat control is automatic. Price for Grinwald model is \$8.75 and \$8.25 for others—prepaid. Product is sold and guaranteed by Ariel Visual Distributing Organization, 156 N. Larchmont Blvd., Los Angeles 4, Calif.

New 'Mart Message' Available

The Camera Mart, Inc., 70 W. 45th St., New York, announces the 1959 edition of its popular 'Mart Message' equipment catalogue ready for distribution. Copies are mailed free on request. The Camera Mart also points out it now has available for demonstration in its showrooms, the Hallen magnetic film recorder and the new Ampco 'Cine Voice' 16mm. sound camera.

Kinevox Amplifier-Mixer

Kinevox, Inc., 4000 Riverside Dr., Burbank, Calif., announces the addition to its line of magnetic recording equipment of a new 4-position amplifier-mixer as companion equipment to the Kinevox synchronous magnetic film recorder and the Kinevox film phonograph or dubber. Data sheet giving complete details may be had by writing to the manufacturer.

New Kodak Booklet

To assist photographers in keeping color films properly, both before and after exposure, Eastman Kodak Co. has just issued a new booklet, "Sozogy And Care Of Kodak Color Films." Free copies may be obtained by writing the Sales Service Division, Eastman Kodak Co., Rochester 4, N. Y.

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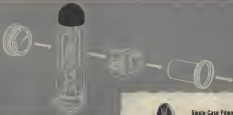
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